

Amendment under 37 C.F.R. § 1.116
Application No. 09/813,144

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method of performing IP multicast communication, comprising the steps of:
 - (a) at least one client requesting the IP multicast communication from a source via at least one bidirectional communication channel; and
 - (b) transmitting the IP multicast communication generated at the source to at least one destination via a unidirectional communication channel that operates independently of the at least one bidirectional communication channel, wherein the at least one client is positioned in the at least one destination, and
 - (c) converting the IP multicast communication to unicast at the at least one destination in accordance with destination information stored at the source based on data transmitted on the at least one bidirectional communication channel.
2. (original): The method of claim 1, further comprising the source receiving a confirmation from the at least one destination via the at least one bidirectional communication channel in response to a confirmation request transmitted from the source to the at least one destination.
3. (previously presented): The method of claim 1, further comprising:
 - (a) recording a receiving time indicative of the at least one client starting to receive the IP multicast communication;

(b) recording a termination time indicative of the at least one client terminating reception of the IP multicast communication; and

(c) calculating client user statistics and generating a bill for the IP multicast communication in accordance with said client user statistics, wherein at least one of steps (a) and (b) is performed at the source.

4. (previously presented): The method of claim 1, further comprising encoding a live media stream for real-time transmission to the at least one client in step (b).

5. (cancelled)

6. (previously presented): The method of claim 1, wherein step (a) comprises using a number of the at least one bidirectional communication channel that is less than or equal to a number of the at least one destination.

7. (previously presented): The method of claim 6, further comprising using the Internet as at least one bidirectional communication channel.

8. (original): The method of claim 1, the step (b) comprising transmitting the IP multicast communication from a transmitting satellite dish at the source to a receiving satellite dish at the at least one destination through a unidirectional satellite.

9. (cancelled).

10. (currently amended): A system for IP multicast communication, comprising:
a destination that transmits a request via a return channel and receives an IP multicast communication from a unidirectional communication channel; and
a source that receives the request through the return channel, and generates and transmits the IP multicast communication to the unidirectional communication channel in accordance with

the request, wherein the unidirectional communication channel and the return channel operate independently;

a director coupled to the source that receives conversion information via the return channel; and

a conversion server coupled to the destination that converts the IP multicast communication to unicast in accordance with the conversion information and without requiring a routing table.

11. (original): The system of claim 10, wherein the unidirectional communication channel comprises a satellite.

12. (original): The system of claim 10, the destination comprising:
at least one downstream network having a client that generates the request; and
a reception device that receives and transmits the IP multicast communication from the unidirectional communication channel to a router that communicates via the return channel.

13. (original): The system of claim 10, wherein the return channel comprises the Internet.

14. (original): The system of claim 10, wherein the source is configured to record usage statistics for requesting a client at the destination, and generates a bill in response to the usage statistics.

15. (original): The system of claim 10, the source comprising:
a media server that prepares a media stream; and
an upstream network that is coupled to the media server and receives the media stream and generates the IP multicast communication.

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16. (original): The system of claim 15, the source further comprising a media encoder that receives a live media stream and transmits the live media stream to the media server for real-time transmission to a client at the destination.

17. (previously presented):The system of claim 15, further comprising:
a router coupled between the upstream network; and
a transmission device, wherein said transmission device_transmits the IP multicast communication to the unidirectional communication channel without delay.

18. (cancelled).

19. (previously presented):A system for IP multicast communication, comprising:
a destination transmitting a request and receiving an IP multicast communication from a unidirectional satellite, the destination comprising,
at least one downstream network having at least one client that generates the request,

a reception device that receives and transmits the IP multicast communication from the unidirectional satellite to a router that is configured to communicate via a return channel, and

a conversion server coupled to the destination that converts the IP multicast communication to unicast in accordance with conversion information;

a source, configured to send said information to said server and_to record usage statistics for a client in the destination and generate a bill in response to the usage statistics, that receives the request through the return channel, and generates and transmits the IP multicast

communication to the unidirectional satellite in accordance with the request, the source comprising,

a media server configured to output a processed media stream,

a media encoder that receives a live media stream and transmits the live media stream to the media server for processing,

an upstream network coupled to the media server that receives the processed media stream and generates the IP multicast communication,

a director coupled to the source that receives the conversion information via the return channel, and

a router coupled between the upstream network and a transmission device configured to transmit the IP multicast communication to the unidirectional satellite;

wherein the unidirectional satellite and the return channel operate independently, and the return channel comprises the Internet.

20. (cancelled).

21. (previously presented): The method of claim 1, further comprising configuring a router in a transparent manner with respect to a network for application to multi-hop networks positioned in at least one of said source and the at least one destination.

22. (previously presented): The method of claim 10, further comprising a router configured transparently with respect to a network for application to multi-hop networks, located in at least one of said source and said destination.

23. (previously presented): The method of claim 1, further comprising turning off a stream if there is no client listening to said stream from the at least one destination.